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ON THE INHALATION OF MEDICATED VAPORS IN DISEASES OF THE AIR-PASSAGES.

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AMONG the palliative and curative remedies in diseases of the air-passages, there are none more highly recommended by authors, and at the same time more neglected in ordinary practice, than those which are administered in the form of vapor. It would be useless to waste time in attempting to show how powerless are the usual remedies introduced into the stomach against the various forms of local pulmonary and bronchial disease, and especially against phthisis. There seems to be a fashion in medical practice, as well as in the shape of our garments; microscopic bonnets, high-heeled shoes, hoops, and the many absurdities of male and female attire, inflict their penalties upon one generation, and then are displaced by hideous forms of the other extreme, until the next half century sees them re-appear like a returning epidemic, the 17 years locusts, or Encke's comet. There is no better proof of the invincible character of a disease, than the long and ever-increasing list of remedies employed against it. Look at phthisis from this point of view, and see how the grim tyrant scorns the feeble attempts thus far made to arrest his progress. To go back within my recollection only, and within the limits of orthodox practice, we find iodine and its compounds, cod-liver and other fish oils, phosphate of lime, fusel oil, glycerine, and (the last abomination) Bourbon whiskey. These, and others of less note, doubtless were beneficial in isolated cases, and for the relief of certain symptoms; and, recommended by high authority, in turn became the fashionable or routine practice.

This brings me to the subject of *inhalation*, which is now very popular and occasionally beneficial among irregular practitioners in all our large cities. It is my purpose to show that this method of practice affords important aid in the treatment of pulmonary

diseases, and deserves immediate and careful study by all enlightened physicians. As regards phthisis, the great destroyer of life in our neighborhood, we may admit, or not, that it is essentially a disease originating in disordered assimilation and nutrition—that tonics and alteratives, stimulants and sedatives, oils and alkalies, do, or do not, alleviate many of its symptoms. I do not speak here of its nature, constitutional symptoms, internal manifestations, nor ordinary medical treatment, which may vary in the minds of different physicians; but of its external abnormal conditions, as displayed in various lesions of the mucous membrane or of cavities communicating with the air-passages, which, as far as treatment by inhalation goes, may be considered as much external as the varieties of cutaneous ulcers originating from and kept up by constitutional vices. I have no idea that inhalation can prevent tubercular disease, or can be of any special service before the softened deposit opens into the air-passages; but after the pulmonary cavities communicate externally, I see no reason why their surfaces should not be treated on the same principles as external ulcers, or, in other words, by the application of medicated vapors in the only possible method, viz., by *inhalation*. It seems just as absurd to treat such diseased states by medicines introduced into the *stomach only*, as it would be to treat an irritable or gangrenous ulcer of the ankle without external applications. These phthisical conditions of the air-passages are not only for all practical purposes external, but they present various shades of morbid tissue, analogous to the various forms of cutaneous ulcers, and therefore require close study and a proper medication, that inhalation may not aggravate instead of relieving the disease—an additional reason why this powerful method should be in skilful hands. With the present means of diagnosis, the probable condition of the pulmonary mucous membrane may be almost as well determined as in the case of external ulceration; and as the indolent, irritable, inflamed, or sloughing external ulcer requires different remedies, so the different forms of disease in the air-passages demand corresponding medicated inhalations. It is not enough to inhale a medicated vapor, as most sick persons seem to imagine; but it must be a vapor studied to suit the morbid state of the membrane or cavity. It is quite time that the medical profession took up this subject, fraught with so much relief to their patients; it is too late to deny its importance, and useless to overlook it; it must and will be tried, and it is the duty of physicians to divert its advantages from the wastes of empiricism into the channels of science. Acting on the motto, "*fas est etiam ab hoste doceri*," let every one try this system, which, I am convinced, is founded in reason and established in experience.

Inhalation for pulmonary diseases is no new thing. It has been tried for centuries, and always with advantage, even in periods

when diagnosis was very imperfect; and now, with our new lights, new remedies, improved apparatus, and powerful auxiliaries, it demands another trial—let us hope it may have such. To come down to comparatively modern times. Bennet, a London physician, published a work in 1654, entitled "*Vestibulum ad Theatrum Tabidorum*," in which he places what he calls "fumigations" among the principal remedies for phthisis, even in desperate cases. He divides them into moist and dry, calling the former "*halitus*" and the latter "*suffitus*," applicable respectively to excessive dryness and humidity of the mucous membrane. In addition to cases of success, he gives rules for their proper administration. Rejecting all kinds of apparatus, and filling the chamber of the patient with the vapor, he remarks, that the first attempt with the dry fumigations often apparently aggravates the difficulty of breathing, and he prohibits their use within a fortnight after an attack of hæmoptysis. Several receipts are given in this work, which show that inhalation was practised then on the same principles as now, and with the same class of remedies. The three following receipts are given for moist fumigations: 1, a decoction of the roots of elecampane and sweet flag, of the leaves of hyssop, ground-ivy, rosemary and balm, with raisins and anise-seeds; 2, more emollient; composed of liquorice, leaves of colt's-foot, sage, marsh-mallow, and lung-wort, of the flowers of the wood-betony, and of a decoction of barley, with a few seeds of anise and fennel, boiled in a sufficient quantity of water; 3, very astringent—composed of wood of the mastic tree, leaves of the oak, myrtle and tormentil, flowers of St. John's wort, red roses and comfrey.* There are also four recipes for dry fumigations: 1, olibanum, boiled turpentine, and styrax, made into troches with mucilage of flaxseed and althæa; 2, troches made principally of gums guaiacum, myrrh, and benzoin, tormentil root, red roses and red saunders; 3, mucilage of gum tragacanth and rose-water, mixed with powdered sarcocolla, Armenian bole, ivy-gum, mastic, pomegranate flowers, with a few grains of ambergris; 4, same as the last, with the addition of the yellow sulphuret of arsenic (orpiment).

Nicolaus Piso, a French physician, whose work (published in 1580, "*De cognoscendo et curando morbos*") was much esteemed by Boerhaave, reports the case of a woman, whose occupation was heating a furnace, and who was cured of a chronic pulmonary disease (called by him "*phthisis, seu tabes*") by being obliged to breathe continually the dry heated air of the fire—a fact in favor of dry inhalations. On the contrary, about a century ago, the warm moist air of stables in which cows were kept was considered a sovereign remedy for phthisical complaints. These opposite hygienic conditions are no farther apart than are many of the *climates*

* For the old details of this article I am indebted principally to the "*Mémoires de l'Académie Royale de Chirurgie*," Paris, 1774.

recommended by physicians for the residence of consumptive people, and go to show that different stages of the same disease may be benefited by exactly opposite remedies, and that the best medication, wrongly applied, may be fatally dangerous. In phthisis, more than in almost any other disease, we find the truth of the Hippocratic maxim: "*Experientia fallax, judicium difficile.*"

Thomas Bartolinus expresses the greatest confidence in fumigations, which he considers the most natural way of treating pulmonary diseases. He orders the usual pectoral and healing plants to be boiled in water, according to the indications to be fulfilled, and the patient to inhale the vapors with the air he breathes. He says, "the very air will thus be a curative means, and there will no longer be any need of going to Egypt, as Galen advises; we may have all the advantages of this country in our own chambers."

Willis had considerable success in the treatment of phthisis by fumigations. He gives three formulæ for dry inhalation: 1, the gentlest, is composed of the usual balsamic remedies, olibanum, amber and benzoin, gum guaiacum and tolu, with red roses and red saunders reduced to powder; No. 2 is composed of ivy gum and olibanum, aa ʒij.; flowers of sulphur and mastic, aa ʒiss., made into troches with gum traga-anth; No. 3 is made with the same balsams, with the addition of about one third of *orpiment*. He adds, that empirics often prescribed with advantage the smoking of orpiment in a pipe, and that the common people were in the habit of cutting up pieces of the wall-paper of the wine-shops, painted with orpiment, and of smoking it instead of tobacco for pulmonary troubles, inhaling the vapors. He expresses great confidence in such inhalations in phthisis, and recommends their use, preceded by moist fumigations. Perhaps some "*Indian doctor*" may take a hint from this, and add *phthisis* to the long list of diseases curable by *un-aboriginal* poisons; he would most certainly find victims. Though the inhalation of arsenical vapors was denounced at the time as dangerous, we find this receipt in Fuller's "*Pharmacopœia extemporanea*," under the title of "*Suffitus antiphthisicus*":
R. Mastic, myrrh, and amber, aa ʒij.; crude sulphur and orpiment, aa ʒi.; to be made into a coarse powder to be thrown on burning coals, and the vapor to be inhaled. Orpiment was recommended by inhalation as long ago as the time of Galen.

Dr. Mead, in his "*Monita et præcepta medica*," speaking of hectic fever and phthisis, praises very highly the use of balsamic inhalations, and complains that they are too much neglected.

M. Buchoz, in 1769, published a "Treatise on Pulmonary Consumption," in which he advises a humid vegetable fumigation, to be inhaled by means of a tin cone with a suitable mouth-piece, the nostrils being closed during the operation; in this way he recommends the inhalation of the vapors of a decoction of balsamic and emollient plants. Besides those already mentioned, he uses the

leaves of veronica and agrimony, the flowers of primula, feverfew, life-everlasting, horehound, and chamomile.

About the middle of the last century, M. Billard published a memoir on the use of fumigations in phthisis, in which he prefers the dry inhalation, on the ground that this disease is most common in damp climates, like those of Great Britain, Holland, the Netherlands, and the maritime provinces of France, and the least common in drier and interior countries. He in this way explains the advantages of a residence in temperate dry climates; and he thinks that the inhalation of hot moist medicated vapors must be as relaxing and prejudicial as are damp tropical climates. Still, in asthma and in many cases of dry convulsive cough, he confesses that the moist inhalations are of great value. He gives cases of phthisis cured by inhaling an air charged with various aromatic, balsamic, and antiseptic vapors, of moderate warmth, free from acridity and moisture—a very simple, natural and cheap method of imitating the best anti-phthysical climates. His favorite vapor was obtained by melting together, in a metallic vessel, equal parts of yellow wax, fresh from the comb, and common resin, the patient breathing the pleasant aromatic air, resting quietly in bed. For the resin, he sometimes substituted turpentine, adding also Canada, tolu, and Peru balsams. He thinks the wax the most important ingredient, for its emollient and anodyne qualities, and often prescribes it alone; he advises that the apartments of consumptives be lighted at night by candles made of yellow wax, whose balsamic vapor is very soothing to the lungs. It might be worth trying, in this connection, the candles now made from *paraffine*, one of the products of the distillation of the Kentucky bituminous coal, which have an agreeable pyroligneous odor. This author recommends balsamic inhalations in diseases of the throat accompanied by hoarseness and cough, in obstinate catarrhs, in asthma, in hæmoptysis, and in all the symptoms by which phthisis ordinarily manifests itself; he anticipates the most modern treatment in this respect, and observes that, by means of proper apparatus, the vapors of wax, balsams, and resins, might be conducted to the genital mucous membranes, to the great relief of congestions, irritations, ulcers, leucorrhœa, gonorrhœa, &c.

Dr. Beddoes, in 1793, speaks of injury from the inhalation of oxygen, aggravating the cough and hectic fever, and advises atmospheric air mixed with hydrogen or nitrogen, and carbonic acid.

Sir Alex. Crichton, in 1823, met with remarkable success in the treatment of pulmonary diseases by the inhalation of the vapor of boiling tar; and many nostrums since his time have been originated on this principle.

These observations show that the old authors understood quite as well, if not better than the moderns, the advantages to be de-

rived from inhalation in pulmonary diseases. But to come down to more recent times.

Scudamore* gives the following formula for an iodine inhalation: **R.** Iodine, gr. v.; iodide of potash, gr. iij.; alcohol, 3 ij.; distilled water, 3 v.; and saturated tincture of conium, 3 vi. **M.** Of this he directs usually two drachms as the total quantity for each inhalation; two thirds for the first half of the time, and the other third for the remainder; the period being fifteen or twenty minutes three times a day, and the vehicle, water of about 120° Fahr. If expectoration be very difficult, from fifteen to twenty minims of a saturated tincture of ipecac should be occasionally added. The best times for inhalation, he thinks, are before breakfast, before dinner, and before going to bed. The smallest dose of iodine for each inhalation is one tenth of a grain, the largest five eighths of a grain, the medium about one fourth of a grain. The inhalation at first increases the cough a little, but it soon gives relief by facilitating expectoration. It sometimes causes a thickening and irritation in the posterior fauces, which assume a dark-colored inflamed appearance, but with hardly any soreness; it commonly passes away even during the continuance of the treatment, but always if the iodine be suspended for a few days. A spongy state of the gums, without pytalism, as if from mercury, is occasionally produced, which disappears without special treatment. Where moisture is present, iodine sublimes below the temperature of boiling water, and remains diffused in the air even at ordinary summer temperatures. Dr. Murray† prefers the iodine vapor disseminated in an apartment, by putting five grains in two quarts of water at 160°. This gives to the air somewhat the smell of the sea-beach at low tide under a hot sun, and will make a vapor so dense as to stain the clothing a deep yellow; double this quantity will make the eyes smart. In order to obtain an artificial sea-air, Laennec sprinkled some of the wards of his hospital with fresh sea-weed, and with much benefit in certain cases.

Next to iodine, as an alterative and healing inhalation, Scudamore prefers *chlorine*. This was first recommended by the French physicians, who noticed that the workmen in a factory for printed calicoes quickly recovered from any symptoms of phthisis which they had on entering; the rooms were highly charged with the vapor of chlorine disengaged during the various processes. Laennec tried this also, in 1823, by sprinkling chloride of lime in the sick room, and with partial success. Chlorine may be readily disengaged by burning chloric ether in a common camphene lamp. Scudamore obtains the chlorine from the pure aqueous solution, beginning with six minims, and renewing this quantity every three or

* On Inhalation. London, 1834.

† On Heat and Humidity, &c. London, 1829.

four minutes, until about a drachm has been used. If it produces much irritation, conium may be added. As a sedative inhalation in bronchitis or phthisis, where the irritation is very great, he prefers the following: *R.* Acidi hydrocyanici, 3 ss.; tr. conii, 3 ss.; tr. ipecac, 3 ij.; aquæ rosæ, 3 iij. *M.* Of this he prescribes half an ounce, divided into two portions, three times a day; or, for each inhalation, 30 minims of tr. conii, 20 minims of tr. ipecac, and 2 minims of prussic acid, adding two more for the last half of the process. Dr. Lombard, of Geneva, treats catarrh, accompanied by distressing pain and sense of weight in the frontal sinuses, by opium inhalations—sprinkling a few grains of powdered opium on a metallic plate heated in a spirit lamp, and making the patient hold his head in the fumes, which afford speedy relief. Hyoscyamus, stramonium, digitalis, and other narcotics, have been used, singly and combined, warm and cold, as sedatives for cough.

It having been observed that tanners were not liable to consumption, Dr. Murray (*op. cit.*) recommends the inhalation of the vapors from a decoction of oak bark; other astringents, vegetable and mineral, are also of service in cases accompanied by profuse and exhausting expectoration. Creosote is now much employed in this manner, and acts with advantage both as an astringent and antispasmodic, and probably also powerfully disposes ulcers and cavities in the air-passages and lungs to take on a healing process. This substance is the great "*cheval de bataille*" with the "consumption-curers," as may be perceived on putting the nose within their precincts in any of the large cities. Though much abused, it is an admirable remedy. The inhalation of ether and other antispasmodics in asthma and kindred diseases is universally and favorably known. Of the advantage of breathing demulcent vapors in croup, the well-known experience of Dr. John Ware is sufficient proof. In Part VI., 2d Series, of Dr. Simpson's *Obstetric Memoirs and Contributions** (pp. 441-462), are given very interesting facts, showing the comparative immunity of wool-workers in Scotland from phthisis and scrofula and from pulmonary diseases generally. It is also shown that this immunity is in proportion to the more or less "oily" nature of the departments of work in which the operatives are engaged; the more oily the work, the more marked is the exemption from disease. The oil enters the system not only through the cutaneous absorption, but also "by inhalation through the mucous membrane of the lungs" (p. 456). The author gives rules for the external application of oil in scrofulous and tuberculous diseases, which deserve the attention of physicians; anything which promises to stay the progress of this "*opprobrium medicorum*," especially when coming from such a high authority, should at least be tried.

Any diseases which tend to enlarge the chest are said to be

* Edition of Drs. Priestley and Storer, Philadelphia, 1836.

preventives or curatives of phthisis—such are diseases of the heart, asthma, or any affection of the throat which prevents the free passage of air from the lungs, and consequently causes their enlargement. Mr. Ramadge* has met with remarkable success in curing pulmonary diseases by causing his patients to fill the chest many times a day, through tubes about five feet long and half an inch in diameter; and I think there can be no doubt of the utility of frequently inflating the lungs to their utmost capacity with pure air, as a preventive of disease. It would be interesting to ascertain if players on the cornet-à-piston, bugle, clarionet, and other wind instruments requiring long retention of the breath, are not less subject to phthisis and its kindred complaints than are the members of other trades and professions.

In connection with simple inhalations, I would repeat what was said before (Jan. 7, 1858, p. 461), with regard to the superiority of a dry steady cold, even of considerable intensity, to a warm moist air accompanied by sudden changes, as a preventive and curative of pulmonary disease. In other words, the climate of Lake Superior, Canada, or Northern Maine, I consider far preferable to the Brazils, the Indies, the Mediterranean, or the Atlantic Islands. Perhaps the cold climates might not answer for their own native residents; it is undoubtedly true, as Celsus said of the affections alluded to, that "the worst air for a patient is that which has given rise to the disease."

It has thus been seen that the results usually expected from alteratives, narcotics, antispasmodics, astringents, and expectorants, taken into the stomach for the relief of pulmonary diseases, may be more directly, speedily and effectually obtained by the inhalation of the same substances through the lungs. The chief articles, and the principles on which they are used, have been sufficiently detailed; any intelligent physician can add to the list as his cases require. Without undervaluing the constitutional treatment of phthisis—the use of cod-liver and other oils to correct the deficiencies of nutrition and assimilation—the administration of salts of lime to favor the cretaceous transformation of tubercle—or the employment of suitable remedies as general tonics and alteratives—I wish most earnestly to call more attention to what may be called the "*surgical treatment*" of pulmonary diseases. I maintain that the cavities in the lungs, and the ulcerations in any part of the air-passages, should be treated by *direct medication* to the morbid surfaces, just as much as any cutaneous lesion should be treated by external applications; and the only way to do this is by *medicated inhalations*, either of the temperature of the surrounding air, or raised to blood-heat. Diseased surfaces may in this way be stimulated to take on the healing process; and the parietes of cavities, by the constant pressure of the air-cells, enlarged

* F. H. Ramadge, New York, 1839.

by inhalation, from without inward, may be brought in contact so as to favor the formation of cicatricial tissue. Such auxiliary treatment, based on reason and experience, is, I think, a great addition to the armament of the physician in his battle with the "great destroyer."

February, 1858.

DR. GAIRDNER'S CLINICAL LECTURE ON INFLUENZA.

[Concluded from page 30.]

THE most characteristic symptoms of influenza are intense feverishness, usually with great tendency to chilliness or shivering, until the patient takes to bed, and reaction is fairly established. Then come racking headache, with pains in the back and limbs, which sometimes constitute the principal source of suffering; extreme sensation of debility; total prostration of appetite, with less of thirst than is usual in fever; and with these, coryza or mild catarrh, bronchitis, broncho-pneumonia, as the case may be. But though catarrh is frequent, and may be severe, the disease is essentially a fever, not a catarrh. Nay, the catarrh may be absent, or insignificant; not infrequently it is so. In one of the cases I saw among yourselves, there was absolutely no catarrh; in another it was very slight. And I saw two very curious cases a few days since, which enable me to put this point yet more strongly. The catarrh may, in fact, be absent in the very case in which you would, *a priori*, expect its occurrence. A gentleman, who has been long afflicted with spasmodic asthma, with intervals, however, of fair good health, and with no appreciable organic disease of the chest, came to me after he had been struggling for several days with debility and prostration, with chilliness and feverish sensations. These were with him the only manifestations of influenza. [He afterward, at an interval of ten days, had a slight cold in the head, without fever; in the meantime, his whole family sickened with feverish colds, some of them with chest affection, from which he himself remained exempt throughout.] In another case, a gentleman, who also suffers from habitual asthma and bronchitis, and in whom I suspect a morbidly enfeebled heart, sent for me in a great hurry on account of the alarming prostration, produced by this strange and inexplicable "influence." He was, however, more frightened than hurt; in a couple of days he was convalescent, and the amount of bronchitis in his case never gave me the slightest uneasiness.

Even the complications in influenza are not always of a catarrhal kind, nor even confined to the chest. Ten years ago, in connection with a great and general epidemic of influenza, I witnessed in this hospital a succession of cases such as I have never seen since

that time. In the course of a few weeks there occurred, I forget exactly how many, but upward of half a dozen cases of inflammation of all the great serous membranes conjointly—double pleurisy, pericarditis, peritonitis. Most of them were fatal; indeed, they seemed to come into the house only to die; so rapid, so uncontrollable were the symptoms, that no time was given for the application of remedies, even had remedies been clearly indicated.

It is somewhat remarkable, that the great epidemic influenza of 1847-8 began at the same time of the year with the present one, almost to a week. You will find an account of it in the excellent monograph of Dr. Peacock, of London.* That epidemic, however, came upon a population wasted by typhus and other forms of fever, and not yet recovered from the famine and destitution caused by the blight of the potato, and the high prices of grain in 1845-6. Scurvy, dysentery, and fever, preceded the influenza on that occasion, and cholera followed not very long after. Notwithstanding the recent money-crisis, and the distress likely to follow among certain classes of the working population, we may hope that we are at present more favorably situated than we were ten years ago. A short time will show whether the present epidemic is to bear comparison with the last or not. Hitherto it has been of a very mild character, comparatively speaking. I have myself seen only one fatal case—a man who had been for some time in poor health, and who died of a chest complication, not very unlike that of our case of enteric fever. I do not know, indeed, that this can fairly be called a death from influenza, though I believe influenza to have been mixed up with the fatal result.

(From a Clinical Lecture on Friday, November 27th, 1857.)

Since I spoke to you about influenza a week ago, there have been only two additions to the list of acute diseases which appear to have had their origin in it—one a case of pleuro-pneumonia, admitted only two days ago, treated both before and after admission by calomel and opium, and already in process of resolution; the other a case of genuine influenza, with all the usual symptoms, and which, like the former one, was sent up to the fever ward, as lying under suspicion. I have directed her to be put in the closet, apart from the other patients; and we shall make a point of parting with her as soon as possible. So far as the wards are concerned, the epidemic does not appear to have made rapid progress this week.

I have received the Registrar-General's report of mortality in London for the week ending November 21st. It is worth while to compare the indications in this report with those derived from our own observation as regards Edinburgh. For this purpose, I have drawn up a table of those diseases whose mortality appears to be

* On the Influenza, or Epidemic Catarrhal Fever, of 1847-8. London, 1848.

notably above the average of the season, and have calculated the existing mortality as against the corrected average of ten years. The correction I speak of is made thus:—The Registrar's table gives the mortality of each disease during the forty-seventh week of the present year, and during the corresponding week of ten previous years; from these he deduces an average, which occupies a separate column. But before you can use this average as against the numbers of the present year, you must in every case raise it by one tenth, to make allowance for the increase of population, which, it is calculated, increases by one tenth in five years.

Now, the past week has in London been one of unusual mortality *for the season*; seeing that the corrected average for ten years makes the total mortality of the forty-seventh week of the year 1211; while during the past week it has been 1382. This very considerable extra mortality appears to be due chiefly to bronchitis, pneumonia, and phthisis, to which may be added whooping cough. All of these are 20 or more in excess of the average mortality of the season; and bronchitis is in excess by the very large number of 123, showing a mortality much more than double the corrected average of the ten years. These four diseases together have a mortality 188 in excess of the average; while the entire excess of deaths for the week is only 171; the difference being, of course, made by diseases which are below the average, especially typhus, scarlatina, and smallpox, which have at present a low mortality. The other diseases which, though to a smaller extent, have contributed notably to raise the mortality of the past week above the corrected average, are—croup (with which I have included laryngitis), scrofula (the disease of the young), and apoplexy, with paralysis, the diseases of the aged; to which we may add that somewhat vague condition called atrophy (mostly infantile), and that still more vague cause of death called age. Both of these are considerably in excess; and these, with the other causes stated, go to show that the mortality of the past week in London has fallen heavily on the two extremes of life. This indeed is always the case with influenza.

But are we justified in assuming the existence of influenza as a cause of death in these cases, especially when we look to the fact, that not more than 9 deaths are recorded in all London, during the past week, as having occurred from influenza? I think we are; because we may be sure that an epidemic condition which raises the whole mortality by one seventh, which more than doubles the deaths from bronchitis, and largely increases those from other acute diseases of the chest, while the aged and the young, the apoplectic, paralytic, and consumptive, suffer out of proportion to the rest of the population—such an epidemic condition, I say, has essentially the characters attributed to influenza, by whatever name it may be called. The small number of deaths under the special head of

influenza, therefore, is only one proof out of many that the Registrar-General need not have been at the trouble of making a separate class of what he calls zymotic or epidemic diseases. The epidemic tendencies of a given period must be sought, not in any particular class, but in an intelligent consideration of the whole mortality list. Medical men are slow to report a death from influenza when it can be properly placed under any other title. It is, however, the fact (as I know from other sources), that influenza has been unusually prevalent in London.

Table deduced from the Registrar-General's Returns (London) for the week ending November 21, 1857; showing the rate of mortality in the forty-seventh week of the year 1857, in regard to those diseases which are above the corrected average of the same week for ten years:

	Average Mortality.	Actual Mortality.	Excess.	Excess per cent.
Whooping cough - -	33.5	53	20	58
Croup and Laryngitis	13.4	26	13	94
Influenza - - - -	3	9	6	—
Scrofula - - - -	6.5	13	7	—
Phthisis - - - -	137.6	159	21	15
Apoplexy - - - -	25.6	33	7	29
Paralysis - - - -	22.7	31	8	36
Bronchitis - - - -	103.6	227	123	118
Pleurisy - - - -	2.6	7	4	—
Pneumonia - - - -	104.2	127	23	22
Atrophy - - - -	30.6	38	7	24
Age - - - -	49.6	57	7	15
All Causes - - - -	1211.4	1382	171	14

Additional Remarks, Dec. 19th.—The epidemic mortality in London appears to have attained its culminating point, in the week ending December 6, in which the mortality from all causes was 1428; from bronchitis 242, from pneumonia 129, and from phthisis 168. Considered with reference to the season, however, this mortality is by no means so much in excess as that indicated in the above table; and we may therefore possibly conclude, that the epidemic has passed its maximum in London. The next week shows a considerable decline. It is worthy of remark, that all the gentle hints and solicitations of the Registrar-General in the Weekly Reports, have not succeeded in raising the cypher of influenza above 22. In the year 1847, the stated deaths from influenza for the corresponding week were 198, those from bronchitis 343, from pneumonia 306, and from all causes 2454. The epidemic of 1847–8 was, therefore, immensely more fatal than the present one, so far, at least, as we have hitherto gone.

It appears from the returns of the Registrar-General (London) for the quarter ending September, 1857, that the mortality from

acute diseases of the chest was considerably below the average during the past autumn. It began to exceed the decennial average, however, in the month of October; and during the latter weeks of that month and the beginning of November, the increase was considerable, although not such as to give a decidedly epidemic character to the mortality. It was only in the second week of November that the total mortality began to be decidedly in excess of the decennial average.

In Scotland, the Registrar-General's returns show a very large advance on the mortality from pulmonary diseases during the month of November, 1857, as compared with the preceding month. Thus, in October, the deaths from bronchitis in the eight principal towns of Scotland were only 76, while in November they were 151, or *almost exactly double*. Pneumonia in the same period increased from 53 to 76; while phthisis has only advanced from 212 to 228. The increase, as regards bronchitis, is most marked in Aberdeen, next in Greenock, next in Dundee, next in Glasgow, and next in Edinburgh. Influenza scarcely appears in the returns, numbering only 3 in October, and 7 in November.

The weather was, on the whole, fine in November, and not very dissimilar from that of the preceding month. The barometric pressure was somewhat higher than in October, viz., 30.143 inches against 29.817 inches. The mean temperature was nearly six degrees less, viz., 45°·1 against 51° 0. The rainfall was somewhat greater, and there was somewhat more of easterly winds. It is worthy of remark, that the mean development of ozone, as tested at Greenock, was decidedly less in November than in October.

It would be interesting to know to what extent the inland districts of Scotland have been affected with influenza, and whether its manifestations have been simultaneous with those in the cities or not. From circumstances which have incidentally come to my knowledge, I am inclined to believe, that in some places in the neighborhood of Edinburgh the appearance of influenza, in an epidemic form, was considerably later than in the city itself.—*Edinburgh Medical Journal*, January, 1858.

Yellow Fever at Lisbon.—The population of Lisbon in 1857 consisted of 250,000 souls, 50,000 of whom emigrated during the panic. Dr. Guyon, Inspector-General of the Sanitary Department of the Army of France, arrived at Lisbon on the 16th of October, and left there on the 19th of December; and at the period of his departure there had fallen victims to the disorder no less than 5000 persons, and there had been 12,000 persons attacked by yellow fever up to the time of his embarkation. In the year 1856 the cholera prevailed at Lisbon, and the mortality on that occasion amounted to 5000.—*London Lancet*.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY F. E. OLIVER, M.D., SECRETARY.

FEB. 8th.—*Ascaris Lumbricoides of unusual size.*—Dr. MORLAND, referring to the lumbricus which he had shown to the Society, December 14th, 1857, said that it was a little over *seventeen inches* long and proportionally large. It was a female, and, when first seen, the intestinal and genital apparatus were distinctly visible through the integument; after a few days' immersion in diluted alcohol, the skin became opaque. The parasite was brought to Dr. M. whilst attending outpatients at the Central Office of the Boston Dispensary, by the mother of a little girl nine years of age, and who had passed it spontaneously. Anthelmintic medicine was ordered, and the patient desired to report the fact, should more worms be discharged. Not hearing from her for several weeks, it is believed that this may have been the sole specimen, although the lumbricus is seldom solitary.

It has been remarked by observers, and previously so stated to the Society, that *female* children are more obnoxious to lumbrici than males. Also, that those who are poorly lodged and fed, as was true in the instance above given, are far more prone to verminous affections.

Another point worthy of notice is, that when an inordinately large lumbricus is voided, the chances are that no more, or very few, will appear. This is referred to by Cloquet, who says (*Anatomie des Vers Intestinaux Ascaride Lumbricoïde et Echinorhynque Géant, &c.*, Paris, 1824), "generally their size is in an inverse proportion to their number; they are always free in the intestinal canal, and never adhere to its walls." In a note, he excepts cases where accidental perforations, or those resulting from disease, have occurred. Cloquet alludes to the different causes of the variation in the size of these parasites, as follows:—"The ascaris lumbricoides is the species of ascaris the most voluminous. There is great variety in its dimensions, according to the age of the worm, its sex, the sort of animal in which it lives, and probably, also, to the quantity of nutritive matter which it finds in the intestines." On consulting the chief authorities, Dr. M. had found only one who mentions a greater length than that of the individual he had shown, as ever having been witnessed for the lumbricus. Dujardin, quoted by Küchenmeister in his late work (*Manual of Animal and Vegetable Parasites*), states that the male worm averages from four to six inches in length; the female, seven to eleven; and as the extremest length, mentions *eighteen inches*. The specimen, therefore, which has, since its exhibition, been distinguished by Dr. JACKSON with an appropriate mounting and a place in the Society's Cabinet, may be considered worthy of that attention, from its very near approach to the greatest recorded length.

Kuchenmeister, himself, does not speak of the average length attained by the lumbricus. He remarks, however, that the smallest he has ever seen, and which he still preserves as a microscopic specimen, is a "sexually immature worm, of about one and a half inches long;" this he expelled from himself.

All the other writers who state the length of this parasite, give much smaller figures. Thus Cloquet says, the lumbricus is "from

two to fifteen inches in length: it is rare that any exceed twelve inches in the human subject. Their size is ordinarily proportioned to their length. Their diameter, around the middle of their bodies, varies from a line to two lines and a half." Griffith and Hentrey (*Micrographic Dictionary*) state the average length as from *three to fifteen inches*; Jones and Sieveking, *six to fifteen*; Vogel (*Pathological Anatomy*), *six to ten*, "and even fifteen;" Rokitansky, *six to ten*, and even fifteen:—both the latter observers evidently considering fifteen inches as quite unusual:—Bock, *one to fifteen*; Guersant (*Dict. de Médecine*), *three to eleven or twelve inches*.

Dr. HOMANS has in his possession a lumbricus *fifteen and one-half inches* long, which is the next in length to the Cabinet specimen. Since securing the latter, one was brought to Dr. Morland at the Dispensary Office, measuring ten and three-quarters inches. Those residents of the city who receive Dispensary care appear to be extremely fertile in these parasites, as might, indeed, be expected. It is of course necessary to take the statements of parents *cum grano salis*, when they assert that lumbrici *two feet* in length, and frequently over one foot long, are passed by their children; but ocular demonstration allows the inference that both as to size and frequency of occurrence, the population before referred to is likely to afford material for statistics upon the subject, if desirable.

FEB. 8th.—*Tumors of the upper Lid. (Malignant?)*—Dr. BETHUNE reported the case.

The patient, Mrs. R., a widow aged 85 years, entered the Infirmary Jan. 26, 1858. Her health was not strong, and she was subject to asthma. About one year ago she had a fistula at the edge of the upper left orbit, which was supposed by the physician in attendance to be connected with disease of the lachrymal gland. This was followed by a cicatrix and induration with small tumors.

For the last six months the tumors have increased, and, at the time of the examination, a firm, irregularly lobulated tumor, of the size of two half peas, joined by the neck, was felt at the upper edge of the left upper lid, which is somewhat drawn down over the eye by adhesions between the globe and lid.

The upper portion of the tumor seemed to extend up under the orbit. On the 28th, these indurated masses were entirely removed. The upper was found *not* to extend into the orbit. The wound had nearly healed.

The following is the result of the microscopical examination by Dr. SHAW.

"The specimen left with me for microscopic examination, was a cellular growth. The cells were large, of irregular form, quite pale and studded with fine granulations; many of them were elongated and somewhat fusiform. The nuclei, both those contained within the cells and those which were found free, were very large, being about two thirds the diameter of the spherical cells, more or less oval, quite pale and granulated. Very few of these nuclei exhibited nucleoli until after treatment with dilute acetic acid, when nucleoli of considerable size appeared, probably having been previously obscured by the granulations. The disease had the appearance of cancer to the naked eye, and, upon breaking it into fragments, a milky juice was formed, pre-

cisely as in cancer. The cells contained in this fluid were not fully typical of cancer with respect to nucleoli, but certainly they approached nearer this disease than any other."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, FEBRUARY 18, 1858.

THE ABUSE OF MEDICAL CHARITIES.

THE medical profession has ever been ready to give its best services to those whose means admit of no pecuniary return: and there is probably no physician who has not upon his list of patients many of this class. It is often a real pleasure to extend this aid to such persons, many of whom are interesting *in themselves* to the practitioner, and not alone from the phenomena of disease which they present. Generally, too, there is no little genuine gratitude manifested by the poor toward their medical attendants; the exceptions, it is true, are many, but when wanting in this pleasing characteristic, the lack is an entire one, and not exhibited toward physicians only.

In conjunction with medical men, the public has always been liberal in aiding those who fall sick whilst contending with poverty, or who have been reduced from comparative comfort to want by illness or accident.

That great abuses may creep into this class of charities, however, must be admitted. There are doubtless many almost inseparable from them. It is very evident to those experienced in such matters, that advantage is often wrongly taken of the assistance so bountifully afforded in the community in various ways. Perhaps one of the most prolific sources of this abuse is the very profusion with which relief is given. It requires no little judgment and observation, to know when to give, how to give, and how much to give; this is especially evident to those whose duty it is to visit the poor as almoners of any charitable association, as dispensary physicians, &c. There are those among the recipients of all kinds of charity, who, when they find out the sources of relief, are only too willing to throw themselves upon them and cover them up, effectually, from the approach of others more deserving and more modest. Instances are not infrequently detected of a persevering pursuit of alms-seeking, as *a trade*, by those who are actually accumulating little fortunes by it. The moral obliquity which impels human nature to this course, or to others of similar tenor, is to be lamented, but the correlative mischief caused by it is yet more disastrous. Not only is the confidence of the charitable shaken, and repulsive feelings engendered, both toward mendicants as a class, and insensibly, perhaps, toward all poor persons, but the consequent diminution of assistance afforded to the worthy sufferers is undoubtedly marked.

We are satisfied, from personal experience, that there are very many who seek medical assistance at Dispensary offices, or through the visiting physicians who are assigned to the various wards of our city, who can well afford to pay a small fee. Such, when it can be ascertained that this is the fact, should not be assisted; even if their cases present

unusual interest, the profession generally is entitled to the advantage derivable from the detail of the phenomena through some attending physician who can report the facts: and he should receive fees for his services, proportionate to the ability of the patient.

There are, strange as it may seem, individuals who are so eager to avail themselves of all gratuities, whether they are in need or not, that they will swallow medicines by the gallon, and scrupulously follow even very troublesome medical directions, provided they do not have to *pay* for the same. Many such come to a charitable infirmary to be treated for slight ailments which would soon disappear of themselves, because it is medication *made easy*; a rather fascinating pursuit, in fact. Besides these, however, others, whose dress and bearing show that they are not properly dispensary patients, seek and receive aid which ought to be reserved for persons far more needy.

Whether it is possible to prevent this imposition, either wholly or in part, is a problem worthy of solution. Much trouble and pains-taking, together with some system of registration, would probably be demanded, in order to effect this desirable end. It seems worthy of trial: for doubtless the expenditure of money, time and labor would be materially lessened, or at least more worthily appropriated, by the intervention of some such means.

In England, it has been found, of late, that most enormous sums have been expended in sustaining public medical charities. The system of subscription, which enables individuals, for a comparatively small annual stipend, to send servants and other retainers into hospital, or to place them under dispensary care, would seem to have been much abused, according to the statements of the *Lancet*. That the best medical advice and most conscientious therapeutic efforts have been put into requisition, without any remuneration, very often, when it should have been otherwise, cannot be questioned. We hold that a rich man, who cares for valuable servants as he ought, should both seek medical advice for them and be willing to pay for it. Yet it is common enough to meet with such persons who themselves send for a physician for their servants, and then either expect them to pay for his attendance out of their own wages, and of course at a reduced rate of fee, the physician not wishing to extort full fees under the circumstances; or else, if the physician be the medical attendant of the master's family, he will be expected to charge nothing, or less than half price, for his services. Now, where there is only casual advice given, or a short service rendered, this may pass; but during a long illness or in cases of serious injury, we submit that it is unreasonable, and ought neither to be expected by the master of the family nor tolerated by the medical adviser.

The subject is one of great importance, in many aspects. We have not space to enlarge upon it further at this time; but we can testify to the truth of our positions from our own experience and from the strongly-expressed opinions of others; several medical gentlemen having recently spoken of the subject to us in a feeling manner. The members of our profession are, usually, for years, insufficiently remunerated; they are, to a proverb, ready to help the indigent at all times and in many ways; they should never be deprived of their legitimate dues.

We have already referred to the *Lancet*, as having lately noticed

some "gigantic" medical abuses in England, and we quote a few paragraphs from the articles in question. In its issue for December 5th, 1857, the above Journal, under the caption "Where to draw the Line," says:—

"There are bounds to everything: so says the old proverb. In Horatian phrase,

'Sunt certi denique fines
Quos ultra citraque nequit consistere rectum.'

But where to draw the line is the main difficulty of statesmen and philosophers.

* * * * *

"Some figures emanating from a committee on Beneficent Institutions of the Statistical Society may well set us thinking upon the difficulty of defining the limit between useful and well-meant charity, and an ill-conceived prodigality which apes the name of Benevolence. From a series of complete returns from all the dispensaries and hospitals in London, we learn that upwards of £1,000,000 of money is spent in the metropolis in the bestowal of medical aid, and that nearly 700,000 persons—one tenth of the whole population—receive medical service for which they do not pay. Here is a gigantic abuse. It is not possible that one tenth of the population are entitled to this gratuitous service. Ill-directed charity becomes injustice here. It is a double-edged evil; it wrongs the medical man; it injures those who improperly lean upon his kindly staff, by giving birth in them to an improvident spirit of dependence.

"These startling figures may suggest another thought. Is it charity, or a penurious and deceptive imitation of it, which prompts Dives in Belgravia to subscribe the annual guinea that entitles his gouty butler or dyspeptic valet to the best medical advice in London? or which induces Mercator in eastern Babylon to barter an annual three guineas for the power of giving hospital letters and immediate dismissal to his sick 'young men'? Under this aspect, these tables supply an index to some very indifferent pages in our social economy. They represent a vast amount of unrewarded labor and unpaid service unjustly exacted from the most laborious, intelligent and deserving of professional men—the members, we mean, of the staff of hospital and dispensary medical officers in this metropolis."

And in the number for Dec. 12th, a correspondent, referring to the above statements, remarks:—

"The 'gigantic abuse' here alluded to is the curse of the profession. But who is to blame for it? Why, the profession itself. Only look at the list of some of the hospitals and dispensaries which have been founded in the metropolis during the last few years. We well know, that to benefit themselves at the expense of others, many of the founders of these institutions have not hesitated to inflict a most serious injury upon the whole body of London medical men."

What is so pertinent to the atmosphere of London is no less so to every other—less perhaps in degree, but precisely the same in essence—like the *Almanacs*, calculated for a special meridian, but answering for several others.

THE PACIFIC MEDICAL AND SURGICAL JOURNAL.

THE above is the title of a new medical periodical published in San Francisco, the first number of which made its appearance with the present year, under the editorship of Dr. John B. Trask and David Wooster. Its enterprising managers are not discouraged by the failure of the *California State Medical Journal*, so ably conducted by Dr. John F. Morse, of Sacramento, to whose talents and ability they pay a well-merited compliment. They feel that the profession in California have regretted their indifference to the advantages of a good medical journal, and that they will be more disposed to support the present undertaking.

The appearance of the first number of the *Pacific Journal* ought to insure its favorable reception. It is well printed, and its articles are of interest and value. A communication "on the Reproduction of Bones," by H. H. Toland, M.D., is illustrated by two beautifully-drawn lithographic plates. The *Journal* contains nearly fifty pages, and will be issued monthly, at five dollars a year. We cordially wish it success, and would express our earnest conviction that the interests of the profession in California cannot be in any way so surely promoted as by the establishment of a good medical periodical in that State.

Appointment.—Dr. John E. Tyler, late Superintendent of the New Hampshire Asylum for the Insane, has been appointed to the office of Superintendent and Physician to the McLean Hospital at Somerville, made vacant by the recent death of Dr. Chauncey Booth.

Dr. Tyler is a native of Boston, and a graduate in medicine of the University of Pennsylvania, and is a gentleman of acknowledged talent and scientific attainments. Although a young man, he has already gained a high reputation in the management of his specialty at the head of the New Hampshire institution. We congratulate the Trustees in the appointment they have made, and tender to Dr. Tyler our hearty felicitations in his accession to a post which has been filled by some of the ablest men in this department of medical science.

Mortality of San Francisco.—The *Alta California* for Jan. 20 contains a very elaborate report on the vital and mortuary statistics of San Francisco for the year ending June 1st, 1857, by Dr. A. F. Sawyer, formerly of this State. The Report occupies ten closely-printed columns. It is a document which reflects the highest credit on the author, and we trust the truths it contains and the lessons it teaches will be clearly appreciated by the citizens and Government of San Francisco. We shall notice the Report more at length in a future No.

Health of the City.—The late uncommon mildness of the season does not yet appear to affect the rate of mortality. The number of deaths last week was 9 less than for the corresponding week of last year, and, as usual at this season, the principal fatal diseases were those of the respiratory organs, among them being 4 cases of croup. The mortality for the corresponding week of 1857 was 80, of which 18 deaths were from consumption, 8 from pneumonia, 2 from croup, and 19 from scarlet fever.

Communications Received.—Case of Chronic Laryngitis.—Case of Exostosis of the Humerus.—On the Pronunciation of Medical Terms.—Case of Perforation of the Tympanum.—Case of Ununited Fracture of the Humerus.—Letter from Edinburgh.—Puerperal Apoplectic Convulsions.—Chorea treated by Arsenic.

MARRIED.—At Ballston, N. Y., M. A. Tinker, M.D., to Miss Phebe J. Wilson, both of B.

DIED.—In Norwich, Ct., Feb. 4th, John Barker, M.D., in the 75th year of his age.

Deaths in Boston for the week ending Saturday noon, February 13th, 71. Males, 28.—Females, 43.—Accident, 2.—inflammation of the brain, 1.—congestion of the brain, 3.—cancer (of the stomach 1; side 1; uterus 1), 3.—consumption, 16.—croup, 4.—dysentery, 2.—diarrhea, 1.—dropsy in the head, 2.—infantile diseases, 3.—puerperal, 2.—scarlet fever, 5.—typhoid fever, 3.—disease of the heart, 2.—intemperance, 1.—inflammation of the lungs, 5.—congestion of the lungs, 2.—marasmus, 4.—measles, 3.—palsy, 3.—pleurisy, 2.—scrofula, 1.—teething, 1.—whooping cough, 1.

Enter 5 years, 31.—between 5 and 20 years, 8.—between 20 and 40 years, 20.—between 40 and 60 years, 8.—above 60 years, 4. Born in the United States, 55.—Ireland, 15.—England, 1.

North Western Medical and Surgical Journal.—The long and now inappropriate title of this excellent Journal, will be changed in the succeeding volume, and the January number will appear under the title of the Chicago Medical Journal. Chicago can now hardly be called the North West, as it was when this Journal was instituted; this change in the name, therefore, seems to be called for. The Chicago Journal, we have no doubt, will well sustain the high stand which it has taken as the North-Western.—*Buffalo Med. Journal.*

Montgomery County (Ohio) Medical Society.—This is one of the best organized societies in the West. Its members, chiefly composed of the Dayton profession, are hard-working, energetic men. The Code of Ethics was adopted at the formation of the Society, and has been enforced. We learn from the proceedings, that a member was expelled at its last meeting for violation of the code. This is the proper course. If the profession is to be placed on a better basis, the code must be enforced.

We hope our Dayton friends will continue in well-doing. The great Webster once said, "I hold that every man is a debtor to his profession." If he is not willing to support the code, and even determinately violates it, he should be expelled. Consultation and all sympathy should be withdrawn from him in his hour of trouble and trial. We hope, too, that our friends will refuse consultations with all *irregulars*, whose professional conduct is bad—or who profess one of the *isms* of the day.—*Cincinnati Lancet and Observer.*

Medical Journals in the United States.—We think there is a growing disposition to lessen the number of our medical journals—to improve their quality—and a decreasing disposition to publish them for nothing! We observe a manifest improvement in the tone and character of almost all our exchanges, and we notice that several have already raised their price: we think these features in our journalism are proper and commendable. Medical periodicals, if published at all, must be paid for in some way—and if afforded to subscribers at a price actually less than the paper and printing cost, somebody must make up the deficit. Now this can very readily be afforded sometimes, by parties who have special interests to advance, just on the same principle that we get a flood of almanacs annually thrust under our doors gratis, for the sake of calling our attention to their author's individual skill or wonderful nostrums: but we doubt if the true interests of legitimate medicine are to be advanced by the publishing of our journals on such principles.—*Ib.*

A New Property of Camomile.—Camomile (*anthemis nobilis*) is described in all treatises of materia medica as emollient, digestive, fortifying, &c., but none point out a most precious virtue, just announced as pertaining to it by M. Ozanam, whose paper on the subject was presented to the Academy of Sciences at its last sitting by M. Cloquet. This virtue consists in preventing suppuration when the local disease is not too far advanced, and in gradually stopping it when it has existed for a long time. For this purpose it is administered in powerful doses of five, ten, and even thirty grammes of the flower in a litre of water, the infusion to be drunk in the course of the day, and to be continued until the cure be effected. Compresses moistened with the infusion may be locally applied; they aid in the cure, but are not necessary—the infusion alone, taken internally, being quite sufficient. In support of his assertion, M. Ozanam quotes a number of cases in which this mode of treatment was successful.—*London Times.*

Formula for making Ink.—The *Journal de Chimie Medicale*, for December, contains the following formula for making ink, which the editor recommends to many of his correspondents who employ so pale an article that he has difficulty in reading their letters:—Logwood shavings, two pounds; alum, four scruples; gum, four scruples; water, two pounds. Boil them together for three quarters of an hour, and strain when cold.

The following is for *ink powder*, which will make three pints of ink, by the addition of that quantity of water:—Powdered nut galls, six and a half ounces; do. sulphate of iron, four ounces and six drachms; do. alum, two drachms; do. gum, six drachms.